



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

Division of Facilities Construction and Management

DFCM

**Request For Bids For Construction Services
Two-Stage Bidding Process**

**Stage II – Paving Contractors Bidders List
Invitation to Bid**

April 13, 2006

**NORTH PARKING LOT PAVING
IMPROVEMENTS
DRAPER HEADQUARTERS**

**UTAH NATIONAL GUARD
DRAPER, UTAH**

DFCM Project No. 05270480

Stanley Consultants
5353 South 960 East, Suite 220
Salt Lake City, Utah 84117
Phone: 293-8800
Fax: 293-8886

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Current copies of the following documents are hereby made part of these contract documents by reference. These documents are available on the DFCM web site at <http://dfcm.utah.gov> or are available upon request from DFCM:

DFCM General Conditions dated May 25, 2005

DFCM Application and Certificate for Payment dated May 25, 2005

Technical Specifications:

Drawings:

The Agreement and General Conditions dated May 25, 2005 have been updated from versions that were formally adopted and in use prior to this date. The changes made to the General Conditions are identified in a document entitled Revisions to General Conditions that is available on DFCM's web site at <http://dfcm.utah.gov>

INVITATION TO BID

**ONLY CONTRACTORS PREVIOUSLY SHORT-LISTED DURING STAGE I
ARE ALLOWED TO BID ON THIS PROJECT**

The State of Utah - Division of Facilities Construction and Management (DFCM) is requesting bids for the construction of the following project:

NORTH PARKING LOT PAVING IMPROVEMENTS - DRAPER HEADQUARTERS
UTAH NATIONAL GUARD – DRAPER, UTAH
DFCM PROJECT NO: 05270480

Project Description: Excavation of sub-grade material, installation of road base, installation of asphalt.
Construction Cost Estimate: \$125,000.00

<u>FIRM NAME</u>	<u>POINT OF CONTACT</u>	<u>PHONE</u>	<u>FAX</u>
Consolidated Paving & Concrete	Mr. Gene Sase	(801) 622-1100	(801) 622-1103
DRD Paving, LLC	Mr. David O. Harrison	(801) 288-1001	(801) 288-1001
Geneva Rock Products, Inc.	Mr. Albert T. Schellenberg	(801) 281-7917	(801) 281-7939
Granite Construction Company	Mr. Alex Rountree	(801) 731-3131	(801) 731-3161
Kilgore Paving and Maintenance	Mr. Jason Kilgore	(801) 364-2777	(801) 364-2722
Miller Paving, Inc.	Mr. Frank Burns	(801) 262-5922	(801) 262-3254
Morgan Asphalt, Inc	Mr. Thomas W. Morgan	(801) 595-0010	(801) 595-0020
Post Asphalt Paving	Mr. Jeff Post	(801) 732-0205	(801) 732-0206
Savage Asphalt	Mr. Ben Savage	(801) 280-4441	(801) 280-2889
Staker and Parson Companies	Mr. Brad Hansen	(801) 731-1111	(801) 409-2687

The bid documents will be available at 10:00 AM on Thursday, April 13, 2006 in electronic format from DFCM at 4110 State Office Building, Salt Lake City, Utah 84114, telephone (801)538-3018 and on the DFCM web page at <http://dfcm.utah.gov>. For questions regarding this project, please contact Dan Clark, Project Manager, DFCM, at (801) 538-3725. No others are to be contacted regarding this project.

A **MANDATORY** pre-bid meeting and site visit will be held at 10:00 AM on Tuesday, April 18, 2006 at the Draper National Guard Building Front Security Office located at 12953 South Minuteman Drive in Draper, Utah. All short listed prime contractors wishing to bid on this project must attend this meeting.

Bids must be submitted by 3:30 PM on Tuesday April 25, 2006 to DFCM, 4110 State Office Building, Salt Lake City, Utah 84114. Bids will be opened and read aloud in the DFCM Conference Room, 4110 State Office Building, Salt Lake City, Utah. Note: Bids must be received at 4110 State Office Building by the specified time. The contractor shall comply with and require all of its subcontractors to comply with the license laws as required by the State of Utah.

A bid bond in the amount of five percent (5%) of the bid amount, made payable to the Division of Facilities Construction and Management on DFCM's bid bond form, shall accompany the bid.

The Division of Facilities Construction & Management reserves the right to reject any or all bids or to waive any formality or technicality in any bid in the interest of the State.

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT
MARLA WORKMAN, CONTRACT COORDINATOR
4110 State Office Bldg., Salt Lake City, Utah 84114

STAGE II BIDDING PROCESS

ONLY CONTRACTORS PREVIOUSLY SHORT-LISTED DURING STAGE I ARE ALLOWED TO BID ON THIS PROJECT

1. Invitational Bid Procedures

Invitation to Bid: DFCM will notify each short-listed firm via e-mail and/or fax when a project is ready for construction services.

Bid Documents: Bidding documents including plans and specifications (if applicable) may be obtained by accessing DFCM's web page at <http://dfcm.utah.gov> or at DFCM's office 4110 State Office Building, Salt Lake City, Utah 84114.

Mandatory Pre-Bid Site Meeting: If required, the schedule contained in this document will indicate the date, time, and place of the mandatory pre-bid site meeting. At this meeting, contractors will receive additional instructions about the project and have an opportunity to ask questions about project details. If a firm fails to attend a pre-bid site meeting labeled "Mandatory" they will not be allowed to bid on the project.

Written Questions: The schedule contained in this document will indicate the deadline for submitting questions in writing to the DFCM Representative pertaining to this project.

Final Addendum: The schedule contained in this document will indicate the deadline for DFCM issuing the final addendum clarifying questions and changes to the scope of work. Contractors are responsible for obtaining and responding to information contained in the addenda.

Submitting Bids: Bids must be submitted to DFCM, 4110 State Office Building, Salt Lake City, Utah 84114 by the deadline indicated on the schedule contained in this document. Bids submitted after the deadline will not be accepted. Bids will be opened at DFCM on the date, time, and place indicated on the schedule. (Additional information pertaining to bidding is contained later in this document). It is your responsibility to allow for the time needed to park on Capitol Hill as recent construction activity has made the parking more difficult. Identification is required to enter the building.

Subcontractors List: The firm selected for the project must submit a list of all subcontractors by the deadline indicated on the schedule contained in this document. (Additional information pertaining to subcontractor lists is contained later in this document)

2. Drawings and Specifications, Other Contract Documents

Drawings and Specifications, as well as other available Contract Documents, may be obtained as stated in the Notice to Contractors.

3. **Bids**

Before submitting a bid, each bidder shall carefully examine the Contract Documents; shall visit the site of the Work; shall fully inform themselves as to all existing conditions and limitations; and shall include in the bid the cost of all items required by the Contract Documents. If the bidder observes that portions of the Contract Documents are at variance with applicable laws, building codes, rules, regulations or contain obvious erroneous or uncoordinated information, the bidder shall promptly notify the DFCM Representative and the necessary changes shall be accomplished by Addendum.

The bid, bearing original signatures, must be typed or handwritten in ink on the Bid Form provided in the procurement documents and submitted in a sealed envelope at the location specified by the Notice to Contractor's prior to the published deadline for the submission of bids.

Bid bond security, in the amount of five percent (5%) of the bid, made payable to the Division of Facilities Construction and Management, shall accompany bid. **THE BID BOND MUST BE ON THE BID BOND FORM PROVIDED IN THE PROCUREMENT DOCUMENTS IN ORDER TO BE CONSIDERED AN ACCEPTABLE BID.**

If the bid bond security is submitted on a bid bond form other than the DFCM's required bid bond form, and the bid security meets all other legal requirements, the bidder will be allowed to provide an acceptable bid bond by the close of business on the next business day following notification by DFCM of submission of a defective bid bond security. **Note: A cashier's check cannot be used as a substitute for a bid bond.**

4. **Contract and Bond**

The Contractor's Agreement will be in the form bound in the specifications. The Contract Time will be as indicated in the bid. The successful bidder, simultaneously with the execution of the Contract Agreement, will be required to furnish a performance bond and a payment bond, both bearing original signatures, upon the forms provided in the procurement documents. The performance and payment bonds shall be for an amount equal to one hundred percent (100%) of the Contract Sum and secured from a company that meets the requirements specified in the requisite forms. Any bonding requirements for Subcontractors will be specified in the Supplementary General Conditions.

5. **Listing of Subcontractors**

Listing of Subcontractors shall be as summarized in the “Instructions and Subcontractor’s List Form”, which are included as part of these Contract Documents. The subcontractors list shall be delivered to DFCM or faxed to DFCM at (801)538-3677 within 24 hours of the bid opening. Requirements for listing additional subcontractors will be listed in the Contract Documents.

DFCM retains the right to audit or take other steps necessary to confirm compliance with requirements for the listing and changing of subcontractors. Any contractor who is found to not be in compliance with these requirements is subject to a debarment hearing and may be debarred from consideration for award of contract for a period of up to three years.

6. **Interpretation of Drawings and Specifications**

If any person or entity contemplating submitting a bid is in doubt as to the meaning of any part of the drawings, specifications or other Contract Documents, such person shall submit to the DFCM Representative a request for an interpretation thereof. The person or entity submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by Addenda duly issued and a copy of such Addenda will be mailed or delivered to each person or entity receiving a set of documents. Neither DFCM nor A/E will be responsible for any other explanations or interpretations of the proposed documents. A/E shall be deemed to refer to the architect or engineer hired by DFCM as the A/E or Consultant for the Project.

7. **Addenda**

Any Addenda issued during the time of bidding shall become part of the Contract Documents made available to the bidders for the preparation of the bid, shall be covered in the bid, and shall be made a part of the Contract.

8. **Award of Contract**

The Contract will be awarded as soon as possible to the lowest, responsive and responsible bidder, based on the lowest combination of base bid and acceptable prioritized alternates, provided the bid is reasonable, is in the interests of the State of Utah to accept and after applying the Utah Preference Laws in U.C.A. Title 63, Chapter 56. The DFCM reserves the right to waive any technicalities or formalities in any bid or in the bidding. Alternates will be accepted on a prioritized basis with Alternate 1 being highest priority, Alternate 2 having second priority, etc.

9. **DFCM Contractor Performance Rating**

DFCM will evaluate the performance of the Contractor. This evaluation may include comments from the User. The Contractor will have an opportunity to review and comment on the evaluation. Evaluations, including the Contractor's comments, may be considered in future selection in the evaluation of the Contractor's past performance.

10. **Licensure**

The Contractor shall comply with and require all of its Subcontractors to comply with the license laws as required by the State of Utah.

11. **Right to Reject Bids**

DFCM reserves the right to reject any or all Bids.

12. **Time is of the Essence**

The completion deadline for this project is **June 30, 2006**. Failure to meet the completion deadline may result in a poor performance rating from DFCM which may have a negative impact on your firm's ability to obtain future work with the state of Utah and may also result in liquidated damages being assessed. Time is of the essence in regard to all the requirements of the Contract Documents.

13. **Withdrawal of Bids**

Bids may be withdrawn on written request received from bidders within 24 hours after the bid opening if the contractor has made an error in preparing the bid.

14. **Product Approvals**

Where reference is made to one or more proprietary products in the Contract Documents, but restrictive descriptive materials of one or more manufacturer(s) is referred to in the Contract Documents, the products of other manufacturers will be accepted, provided they equal or exceed

the standards set forth in the drawings and specifications and are compatible with the intent and purpose of the design, subject to the written approval of the A/E. Such written approval must occur prior to the deadline established for the last scheduled addenda to be issued. The A/E's written approval will be in an issued Addendum. If the descriptive material is not restrictive, the products of other manufacturers specified will be accepted without prior approval provided they are compatible with the intent and purpose of the design as determined by the A/E.

15. **Financial Responsibility of Contractors, Subcontractors and Sub-subcontractors**

Contractors shall respond promptly to any inquiry in writing by the DFCM to any concern of financial responsibility of the Contractor, Subcontractor or Sub-subcontractor.

16. **Debarment.**

By submitting a bid, the Contractor certifies that neither it nor its principals, including project and site managers, have been, or are under consideration for, debarment or suspension, or any action that would exclude such from participation in a construction contract by any governmental department or agency. If the Contractor cannot certify this statement, attach to the bid a detailed written explanation which must be reviewed and approved by the DFCM as part of the requirements for award of the Project.



PROJECT SCHEDULE
Stage II = Two-Stage Bidding Process

PROJECT NAME: NORTH PARKING LOT PAVING IMPROVEMENTS-DRAPER HEADQUARTERS UTAH NATIONAL GUARD – DRAPER, UTAH				
FCM PROJECT # 05270480				
Event	Day	Date	Time	Place
Stage II Bidding Documents Available	Thursday	April 13, 2006	10:00 AM	DFCM, 4110 State Office Bldg, SLC, UT and DFCM web site *
Mandatory Pre-bid Site Meeting	Tuesday	April 18, 2006	10:00 AM	Front Security Office Draper Headquarters Utah National Guard 12953 So. Minuteman Drive Draper, UT
Last Day to Submit Questions	Friday	April 21, 2006	4:00 PM	DFCM, 4110 State Office Bldg, SLC, UT Dan Clark: danclark@utah.gov
Final Addendum Issued	Monday	April 24, 2006	4:00 PM	DFCM, 4110 State Office Bldg, SLC, UT or DFCM web site*
Prime Contractors Turn in Bid and Bid Bond / Bid Opening in DFCM Conference Room	Tuesday	April 25, 2006	3:30 PM	DFCM, 4110 State Office Bldg, SLC, UT
Subcontractors List Due	Wednesday	April 26, 2006	3:30 PM	DFCM, 4110 State Office Bldg, SLC, UT
Project Completion Date	Friday	June 30, 2006		

* DFCM's web site address is <http://dfcm.utah.gov>

**Division of Facilities Construction and Management****BID FORM**

NAME OF BIDDER _____ DATE _____

To the Division of Facilities Construction and Management
4110 State Office Building
Salt Lake City, Utah 84114

The undersigned, responsive to the "Notice to Contractors" and in accordance with the Request for Bids for the **NORTH PARKING LOT PAVING IMPROVEMENTS – DRAPER HEADQUARTERS – UTAH NATIONAL GUARD - DRAPER, UTAH - DFCM PROJECT NO. 05270480** and having examined the Contract Documents and the site of the proposed Work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies as required for the Work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. This price is to cover all expenses incurred in performing the Work required under the Contract Documents of which this bid is a part:

I/We acknowledge receipt of the following Addenda: _____

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
1.	Mobilization	LS	1	\$ _____	\$ _____
2.	Remove existing curb and gutter Dispose of off site	LF	100	\$ _____	\$ _____
3.	Remove exiting ramp Dispose of off site	LF	40	\$ _____	\$ _____
4.	Excavate sub-grade material Can dispose of on site	CY	875	\$ _____	\$ _____
5.	Install 8-inches untreated road base	SY	4,300	\$ _____	\$ _____
6.	Install 3.5-inches asphalt	SY	4,475	\$ _____	\$ _____
7.	Install 4-inch striping as per plans	LF	2,465	\$ _____	\$ _____
8.	Remove/replace fencing Includes new fence posts	LF	230	\$ _____	\$ _____
9.	Saw cut pavement	LF	160	\$ _____	\$ _____
10.	Electrical system tie in for light pole	LS	1	\$ _____	\$ _____
11.	Installation of electrical cable	LF	290	\$ _____	\$ _____
12.	Installation of light pole and base	LS	1	\$ _____	\$ _____
13.	Excavation for soft sub-grade	CY	100	\$ _____	\$ _____

BID FORM
PAGE NO. 2

For all work shown on the Drawings and described in the Specifications and Contract Documents, I/we agree to perform for the sum of:

_____ DOLLARS (\$_____)
(In case of discrepancy, written amount shall govern)

I/We guarantee that the Work will be Substantially Complete by **June 30, 2006** after receipt of the Notice to Proceed, should I/we be the successful bidder, and agree to pay liquidated damages in the amount of **\$500.00** per day for each day after expiration of the Contract Time as stated in Article 3 of the Contractor's Agreement.

This bid shall be good for 45 days after bid opening.

Enclosed is a 5% bid bond, as required, in the sum of _____

The undersigned Contractor's License Number for Utah is _____.

Upon receipt of notice of award of this bid, the undersigned agrees to execute the contract within ten (10) days, unless a shorter time is specified in Contract Documents, and deliver acceptable Performance and Payment bonds in the prescribed form in the amount of 100% of the Contract Sum for faithful performance of the contract. The Bid Bond attached, in the amount not less than five percent (5%) of the above bid sum, shall become the property of the Division of Facilities Construction and Management as liquidated damages for delay and additional expense caused thereby in the event that the contract is not executed and/or acceptable 100% Performance and Payment bonds are not delivered within time set forth.

Type of Organization: _____(Corporation, Partnership, Individual, etc.)

Any request and information related to Utah Preference Laws: _____

Respectfully submitted,

Name of Bidder

ADDRESS:

Authorized Signature

BID BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

KNOW ALL PERSONS BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal," and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ and authorized to transact business in this State and U. S. Department of the Treasury Listed, (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the STATE OF UTAH, hereinafter referred to as the "Obligee," in the amount of \$ _____ (5% of the accompanying bid), being the sum of this Bond to which payment the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted to Obligee the accompanying bid incorporated by reference herein, dated as shown, to enter into a contract in writing for the _____ Project.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the said principal does not execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the principal, then the sum of the amount stated above will be forfeited to the State of Utah as liquidated damages and not as a penalty; if the said principal shall execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the Principal, then this obligation shall be null and void. It is expressly understood and agreed that the liability of the Surety for any and all defaults of the Principal hereunder shall be the full penal sum of this Bond. The Surety, for value received, hereby stipulates and agrees that obligations of the Surety under this Bond shall be for a term of sixty (60) days from actual date of the bid opening.

PROVIDED, HOWEVER, that this Bond is executed pursuant to provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals on the date indicated below, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

DATED this _____ day of _____, 20_____.

Principal's name and address (if other than a corporation):

By: _____

Title: _____

Principal's name and address (if a corporation):

By: _____

Title: _____
(Affix Corporate Seal)

Surety's name and address:

By: _____
Attorney-in-Fact (Affix Corporate Seal)

STATE OF _____)
COUNTY OF _____) ss.

On this ____ day of _____, 20_____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20_____.

My Commission Expires: _____

Resides at: _____

Agency: _____
Agent: _____
Address: _____
Phone: _____

NOTARY PUBLIC

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General

**Division of Facilities Construction and Management****INSTRUCTION AND SUBCONTRACTORS LIST FORM**

The three low bidders, as well as all other bidders that desire to be considered, are required by law to submit to DFCM within 24 hours of bid opening a list of **ALL** first-tier subcontractors, including the subcontractor's name, bid amount and other information required by Building Board Rule and as stated in these Contract Documents, on the following basis:

PROJECTS UNDER \$500,000 - ALL SUBS \$20,000 OR OVER MUST BE LISTED
PROJECTS \$500,000 OR MORE - ALL SUBS \$35,000 OR OVER MUST BE LISTED

- Any additional subcontractors identified in the bid documents shall also be listed.
- The DFCM Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law.
- List subcontractors for base bid as well as the impact on the list that the selection of any alternate may have.
- Bidder may not list more than one subcontractor to perform the same work.
- Bidder must list "Self" if performing work itself.

LICENSURE:

The subcontractor's name, the type of work, the subcontractor's bid amount, and the subcontractor's license number as issued by DOPL, if such license is required under Utah Law, shall be listed. Bidder shall certify that all subcontractors, required to be licensed, are licensed as required by State law. A subcontractor includes a trade contractor or specialty contractor and does not include suppliers who provide only materials, equipment, or supplies to a contractor or subcontractor.

BIDDER LISTING 'SELF' AS PERFORMING THE WORK:

Any bidder that is properly licensed for the particular work and intends to perform that work itself in lieu of a subcontractor that would otherwise be required to be on the subcontractor list, must insert the term 'Self' for that category on the subcontractor list form. Any listing of 'Self' on the sublist form shall also include the amount allocated for that work.

'SPECIAL EXCEPTION':

A bidder may list 'Special Exception' in place of a subcontractor when the bidder intends to obtain a subcontractor to perform the work at a later date because the bidder was unable to obtain a qualified or reasonable bid under the provisions of U.C.A. Section 63A-5-208(4). The bidder shall insert the term 'Special Exception' for that category of work, and shall provide documentation with the subcontractor list describing the bidder's efforts to obtain a bid of a qualified subcontractor at a reasonable cost and why the bidder was unable to obtain a qualified subcontractor bid. The Director must find that the bidder complied in good faith with State law requirements for any 'Special Exception' designation, in order for the bid to be considered. If awarded the contract, the Director shall supervise the bidder's efforts to obtain a qualified subcontractor bid. The amount of the awarded contract may not be adjusted to reflect the actual amount of the subcontractor's bid. Any listing of 'Special Exception' on the sublist form shall also include amount allocated for that work.

INSTRUCTIONS AND SUBCONTRACTORS LIST FORM
Page No. 2

GROUND FOR DISQUALIFICATION:

The Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law. Director may withhold awarding the contract to a particular bidder if one or more of the proposed subcontractors are considered by the Director to be unqualified to do the Work or for such other reason in the best interest of the State of Utah. Notwithstanding any other provision in these instructions, if there is a good faith error on the sublist form, at the sole discretion of the Director, the Director may provide notice to the contractor and the contractor shall have 24 hours to submit the correction to the Director. If such correction is submitted timely, then the sublist requirements shall be considered met.

CHANGES OF SUBCONTRACTORS SPECIFICALLY IDENTIFIED ON SUBLIST FORM:

Subsequent to twenty-four hours after the bid opening, the contractor may change its listed subcontractors only after receiving written permission from the Director based on complying with all of the following criteria.

- (1) The contractor has established in writing that the change is in the best interest of the State and that the contractor establishes an appropriate reason for the change, which may include, but not is not limited to, the following reasons: the original subcontractor has failed to perform, or is not qualified or capable of performing, and/or the subcontractor has requested in writing to be released.
- (2) The circumstances related to the request for the change do not indicate any bad faith in the original listing of the subcontractors.
- (3) Any requirement set forth by the Director to ensure that the process used to select a new subcontractor does not give rise to bid shopping.
- (4) Any increase in the cost of the subject subcontractor work is borne by the contractor.
- (5) Any decrease in the cost of the subject subcontractor work shall result in a deductive change order being issued for the contract for such decreased amount.
- (6) The Director will give substantial weight to whether the subcontractor has consented in writing to being removed unless the Contractor establishes that the subcontractor is not qualified for the work.

EXAMPLE:

Example of a list where there are only four subcontractors:

TYPE OF WORK	SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION"	SUBCONTRACTOR BID AMOUNT	CONT. LICENSE #
ELECTRICAL	ABCD Electric Inc.	\$350,000.00	123456789000
LANDSCAPING	"Self"	300,000.00	123456789000
CONCRETE (ALTERNATE #1)	XYZ Concrete Inc	298,000.00	987654321000
MECHANICAL	"Special Exception" (attach documentation)	Fixed at: 350,000.00	(TO BE PROVIDED AFTER OBTAINING SUBCONTRACTOR)

**PURSUANT TO STATE LAW - SUBCONTRACTOR BID AMOUNTS CONTAINED IN THIS
SUBCONTRACTOR LIST SHALL NOT BE DISCLOSED UNTIL THE CONTRACT HAS BEEN AWARDED.**

**Division of Facilities Construction and Management****SUBCONTRACTORS LIST
FAX TO 801-538-3677****PROJECT TITLE:** _____**Caution:** You must read and comply fully with instructions.

TYPE OF WORK	SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION"	SUBCONTRACTOR BID AMOUNT	CONT. LICENSE #

We certify that:

1. This list includes all subcontractors as required by the instructions, including those related to the base bid as well as any alternates.
2. We have listed "Self" or "Special Exception" in accordance with the instructions.
3. All subcontractors are appropriately licensed as required by State law.

FIRM: _____

DATE: _____

SIGNED BY: _____

NOTICE: FAILURE TO SUBMIT THIS FORM, PROPERLY COMPLETED AND SIGNED, AS REQUIRED IN THESE CONTRACT DOCUMENTS, SHALL BE GROUNDS FOR DFCMS REFUSAL TO ENTER INTO A WRITTEN CONTRACT WITH BIDDER. ACTION MAY BE TAKEN AGAINST BIDDERS BID BOND AS DEEMED APPROPRIATE BY DFCM. ATTACH A SECOND PAGE IF NECESSARY.

FUGITIVE DUST PLAN

The Contractor will fill out the form and file the original with the Division of Air Quality and a copy of the form with the Division of Facilities Construction & Management, prior to the issuance of any notice to proceed.

The Contractor will be fully responsible for compliance with the Fugitive Dust Control Plan, including the adequacy of the plan, any damages, fines, liability, and penalty or other action that results from noncompliance.

Utah Division of Air Quality

April 20, 1999

**GUIDANCE THAT MUST BE CONSIDERED IN DEVELOPING AND SUBMITTING A
DUST CONTROL PLAN FOR COMPLIANCE WITH R307-309-3, 4, 5, 6, 7**

Source Information:

1. Name of your operation (source): provide a name if the source is a construction site.
2. Address or location of your operation or construction site.
3. UTM coordinates or Longitude/Latitude of stationary emission points at your operation.
4. Lengths of the project, if temporary (time period).
5. Description of process (include all sources of dust and fugitive dust). Please, if necessary, use additional sheets of paper for this description. Be sure to mark it as an attachment.
6. Type of material processed or disturbed.
7. Amount of material processed (tons per year, tons per month, lbs./hr., and applicable units).

8. Destination of product (where will the material produced be used or transported, be specific, provide address or specific location), information needed for temporary relocation applicants.
9. Identify the individual who is responsible for the implementation and maintenance of fugitive dust control measures. List name(s), position(s) and telephone number(s).
10. List, and attach copies of any contract lease, liability agreement with other companies that may, or will, be responsible for dust control on site or on the project.

Description of Fugitive Dust Emission Activities
(Things to consider in addressing fugitive dust control strategies.)

1. Type of activities (drilling and blasting, road construction, development construction, earth moving and excavation, handling and hauling materials, cleaning and leveling, etc).
2. List type of equipment generating the fugitive dust.
3. Diagram the location of each activity or piece of equipment on site. Please attach the diagram.
4. Provide pictures or drawings of each activity. Include a drawing of the unpaved/paved road network used to move loads “on” and “off” property.
5. Vehicle miles travels on unpaved roads associated with the activity (average speed).
6. Type of dust emitted at each source (coal, cement, sand, soil, clay, dust, etc.)
7. Estimate the size of the release area at which the activity occurs (square miles). For haul or dirt roads include total miles of road in use during the activity.

Description of Fugitive Dust Emission Controls on Site

Control strategies must be designed to meet 20% opacity or less on site (a lesser opacity may be defined by Approval Order conditions or federal requirements such as NSPS), and control strategies must prevent exceeding 10% opacity from fugitive dust at the property boundary (site boundary) for compliance with R307-309-3.

1. Types of ongoing emission controls proposed for each activity, each piece of equipment, and haul roads.
2. Types of additional dust controls proposed for bare, exposed surfaces (chemical stabilization, synthetic cover, wind breaks, vegetative cover, etc).
3. Method of application of dust suppressant.
4. Frequency of application of dust suppressant.
5. Explain what triggers the use of a special control measure other than routine measures already in place, such as covered loads or measures covered by a permit condition (increase in opacity, high winds, citizen complaints, dry conditions, etc).
6. Explain in detail what control strategies/measures will be implemented off-hours, i.e., Saturdays/Sundays/Holidays, as well as 6 PM to 6 AM each day.

Description of Fugitive Dust Control Off-site

Prevent, to the maximum extent possible, deposition of materials, which may create fugitive dust on public and private paved roads in compliance with R307-309-5, 6, 7.

1. Types of emission controls initiated by your operation that are in place “off” property (application of water, covered loads, sweeping roads, vehicle cleaning, etc.).

2. Proposed remedial controls that will be initiated promptly if materials, which may create fugitive dust, are deposited on public and private paved roads.

Submit the Dust Control Plan to:

Executive Secretary
Utah Air Quality Board
POB 144820
15 North 1950 West
Salt Lake City, Utah 84114-4820

Phone: (801) 536-4000
FAX: (801) 536-4099

Fugitive Dust Control Plan Violation Report

When a source is found in violation of R307-309-3 or in violation of the Fugitive Dust Control Plan, the source must submit a report to the Executive Secretary within 15 days after receiving a Notice of Violation. The report must include the following information:

1. Name and address of dust source.
2. Time and duration of dust episode.
3. Meteorological conditions during the dust episode.
4. Total number and type of fugitive dust activities and dust producing equipment within each operation boundary. If no change has occurred from the existing dust control plan, the source should state that the activity/equipment is the same.
5. Fugitive dust activities or dust producing equipment that caused a violation of R-307-309-3 or the source's dust control plan.
6. Reasons for failing to control dust from the dust generating activity or equipment.
7. New and/or additional fugitive dust control strategies necessary to achieve compliance with R307-309-3, 4, 5, 6, or 7.
8. If it can not be demonstrated that the current approved Dust Control Plan can result in compliance with R307-309-3 through 7, the Dust Control Plan must be revised so as to demonstrate compliance with 307-309-3 through 7. Within 30 days of receiving a fugitive dust Notice of Violation, the source must submit the revised Plan to the Executive Secretary for review and approval.

Submit the Dust Control Plan to:

Executive Secretary	Phone: (801) 536-4000
Utah Air Quality Board	FAX: (801) 536-4099
POB 144820	
15 North 1950 West	
Salt Lake City, Utah 84114-4820	

Attachments: DFCM Form FDR R-307-309, Rule 307-309

CONTRACTOR'S AGREEMENT

FOR:

THIS CONTRACTOR'S AGREEMENT, made and entered into this ____ day of _____, 20__, by and between the DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT, hereinafter referred to as "DFCM", and _____, incorporated in the State of _____ and authorized to do business in the State of Utah, hereinafter referred to as "Contractor", whose address is _____.

WITNESSETH: WHEREAS, DFCM intends to have Work performed at _____
_____.

WHEREAS, Contractor agrees to perform the Work for the sum stated herein.

NOW, THEREFORE, DFCM and Contractor for the consideration provided in this Contractor's Agreement, agree as follows:

ARTICLE 1. SCOPE OF WORK. The Work to be performed shall be in accordance with the Contract Documents prepared by _____ and entitled "_____
_____."

The DFCM General Conditions ("General Conditions") dated May 25, 2005 on file at the office of DFCM and available on the DFCM website, are hereby incorporated by reference as part of this Agreement and are included in the specifications for this Project. All terms used in this Contractor's Agreement shall be as defined in the Contract Documents, and in particular, the General Conditions.

The Contractor Agrees to furnish labor, materials and equipment to complete the Work as required in the Contract Documents which are hereby incorporated by reference. It is understood and agreed by the parties hereto that all Work shall be performed as required in the Contract Documents and shall be subject to inspection and approval of DFCM or its authorized representative. The relationship of the Contractor to the DFCM hereunder is that of an independent Contractor.

ARTICLE 2. CONTRACT SUM. The DFCM agrees to pay and the Contractor agrees to accept in full performance of this Contractor's Agreement, the sum of _____ DOLLARS AND NO CENTS (\$_____.00), which is the base bid, and which sum also includes the cost of a 100%

CONTRACTOR'S AGREEMENT
PAGE NO. 2

Performance Bond and a 100% Payment Bond as well as all insurance requirements of the Contractor. Said bonds have already been posted by the Contractor pursuant to State law. The required proof of insurance certificates have been delivered to DFCM in accordance with the General Conditions before the execution of this Contractor's Agreement.

ARTICLE 3. TIME OF COMPLETION AND DELAY REMEDY. The Work shall be Substantially Complete within _____ (____) calendar days after the date of the Notice to Proceed. Contractor agrees to pay liquidated damages in the amount of \$_____ per day for each day after expiration of the Contract Time until the Contractor achieves Substantial Completion in accordance with the Contract Documents, if Contractor's delay makes the damages applicable. The provision for liquidated damages is: (a) to compensate the DFCM for delay only; (b) is provided for herein because actual damages can not be readily ascertained at the time of execution of this Contractor's Agreement; (c) is not a penalty; and (d) shall not prevent the DFCM from maintaining Claims for other non-delay damages, such as costs to complete or remedy defective Work.

No action shall be maintained by the Contractor, including its or Subcontractor or suppliers at any tier, against the DFCM or State of Utah for damages or other claims due to losses attributable to hindrances or delays from any cause whatsoever, including acts and omissions of the DFCM or its officers, employees or agents, except as expressly provided in the General Conditions. The Contractor may receive a written extension of time, signed by the DFCM, in which to complete the Work under this Contractor's Agreement in accordance with the General Conditions.

ARTICLE 4. CONTRACT DOCUMENTS. The Contract Documents consist of this Contractor's Agreement, the Conditions of the Contract (DFCM General Conditions, Supplementary and other Conditions), the Drawings, Specifications, Addenda and Modifications. The Contract Documents shall also include the bidding documents, including the Notice to Contractors, Instructions to Bidders/Proposers and the Bid/Proposal, to the extent not in conflict therewith and other documents and oral presentations that are documented as an attachment to the contract.

All such documents are hereby incorporated by reference herein. Any reference in this Contractor's Agreement to certain provisions of the Contract Documents shall in no way be construed as to lessen the importance or applicability of any other provisions of the Contract Documents.

ARTICLE 5. PAYMENT. The DFCM agrees to pay the Contractor from time to time as the Work progresses, but not more than once each month after the date of Notice to Proceed, and only upon Certificate of the A/E for Work performed during the preceding calendar month, ninety-five percent (95%) of the value of the labor performed and ninety-five percent (95%) of the value of materials furnished in place or on the site. The Contractor agrees to furnish to the DFCM invoices for materials purchased and on the site but not installed, for which the

CONTRACTOR'S AGREEMENT
PAGE NO. 3

Contractor requests payment and agrees to safeguard and protect such equipment or materials and is responsible for safekeeping thereof and if such be stolen, lost or destroyed, to replace same.

Such evidence of labor performed and materials furnished as the DFCM may reasonably require shall be supplied by the Contractor at the time of request for Certificate of Payment on account. Materials for which payment has been made cannot be removed from the job site without DFCM's written approval. Five percent (5%) of the earned amount shall be retained from each monthly payment. The retainage, including any additional retainage imposed and the release of any retainage, shall be in accordance with UCA 13-8-5 as amended. Contractor shall also comply with the requirements of UCA 13-8-5, including restrictions of retainage regarding subcontractors and the distribution of interest earned on the retention proceeds. The DFCM shall not be responsible for enforcing the Contractor's obligations under State law in fulfilling the retention law requirements with subcontractors at any tier.

ARTICLE 6. INDEBTEDNESS. Before final payment is made, the Contractor must submit evidence satisfactory to the DFCM that all payrolls, materials bills, subcontracts at any tier and outstanding indebtedness in connection with the Work have been properly paid. Final Payment will be made after receipt of said evidence, final acceptance of the Work by the DFCM as well as compliance with the applicable provisions of the General Conditions.

Contractor shall respond immediately to any inquiry in writing by DFCM as to any concern of financial responsibility and DFCM reserves the right to request any waivers, releases or bonds from Contractor in regard to any rights of Subcontractors (including suppliers) at any tier or any third parties prior to any payment by DFCM to Contractor.

ARTICLE 7. ADDITIONAL WORK. It is understood and agreed by the parties hereto that no money will be paid to the Contractor for additional labor or materials furnished unless a new contract in writing or a Modification hereof in accordance with the General Conditions and the Contract Documents for such additional labor or materials has been executed. The DFCM specifically reserves the right to modify or amend this Contractor's Agreement and the total sum due hereunder either by enlarging or restricting the scope of the Work.

ARTICLE 8. INSPECTIONS. The Work shall be inspected for acceptance in accordance with the General Conditions.

ARTICLE 9. DISPUTES. Any dispute, PRE or Claim between the parties shall be subject to the provisions of Article 7 of the General Conditions. DFCM reserves all rights to pursue its rights and remedies as provided in the General Conditions.

ARTICLE 10. TERMINATION, SUSPENSION OR ABANDONMENT. This Contractor's Agreement may be terminated, suspended or abandoned in accordance with the General Conditions.

ARTICLE 11. DFCM'S RIGHT TO WITHHOLD CERTAIN AMOUNT AND MAKE USE THEREOF. The DFCM may withhold from payment to the Contractor such amount as, in DFCM's judgment, may be necessary to pay just claims against the Contractor or Subcontractor at any tier for labor and services rendered and materials furnished in and about the Work. The DFCM may apply such withheld amounts for the payment of such claims in DFCM's discretion. In so doing, the DFCM shall be deemed the agent of Contractor and payment so made by the DFCM shall be considered as payment made under this Contractor's Agreement by the DFCM to the Contractor. DFCM shall not be liable to the Contractor for any such payment made in good faith. Such withholdings and payments may be made without prior approval of the Contractor and may be also be prior to any determination as a result of any dispute, PRE, Claim or litigation.

ARTICLE 12. INDEMNIFICATION. The Contractor shall comply with the indemnification provisions of the General Conditions.

ARTICLE 13. SUCCESSORS AND ASSIGNMENT OF CONTRACT. The DFCM and Contractor, respectively bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement, and to partners, successors, assigns and legal representatives of such other party with respect to all covenants, provisions, rights and responsibilities of this Contractor's Agreement. The Contractor shall not assign this Contractor's Agreement without the prior written consent of the DFCM, nor shall the Contractor assign any moneys due or to become due as well as any rights under this Contractor's Agreement, without prior written consent of the DFCM.

ARTICLE 14. RELATIONSHIP OF THE PARTIES. The Contractor accepts the relationship of trust and confidence established by this Contractor's Agreement and covenants with the DFCM to cooperate with the DFCM and A/E and use the Contractor's best skill, efforts and judgment in furthering the interest of the DFCM; to furnish efficient business administration and supervision; to make best efforts to furnish at all times an adequate supply of workers and materials; and to perform the Work in the best and most expeditious and economic manner consistent with the interests of the DFCM.

ARTICLE 15. AUTHORITY TO EXECUTE AND PERFORM AGREEMENT. Contractor and DFCM each represent that the execution of this Contractor's Agreement and the performance thereunder is within their respective duly authorized powers.

ARTICLE 16. ATTORNEY FEES AND COSTS. Except as otherwise provided in the dispute resolution provisions of the General Conditions, the prevailing party shall be entitled to reasonable attorney fees and costs incurred in any action in the District Court and/or appellate body to enforce this Contractor's Agreement or recover damages or any other action as a result of a breach thereof.

CONTRACTOR'S AGREEMENT
PAGE NO. 5

IN WITNESS WHEREOF, the parties hereto have executed this Contractor's Agreement on the day and year stated hereinabove.

CONTRACTOR: _____

Signature Date

Title: _____

State of _____)
County of _____)

Please type/print name clearly

On this ____ day of _____, 20____, personally appeared before me, _____, whose identity is personally known to me (or proved to me on the basis of satisfactory evidence) and who by me duly sworn (or affirmed), did say that he (she) is the _____ (title or office) of the firm and that said document was signed by him (her) in behalf of said firm.

(SEAL)

Notary Public

My Commission Expires _____

APPROVED AS TO AVAILABILITY
OF FUNDS:

Financial Manager, Date
Division of Facilities Construction
and Management

**DIVISION OF FACILITIES
CONSTRUCTION AND MANAGEMENT**

Manager - Date
Capital _____

APPROVED AS TO FORM:
ATTORNEY GENERAL
May 25, 2005
By: Alan S. Bachman
Asst Attorney General

APPROVED FOR EXPENDITURE:

Division of Finance Date

PERFORMANCE BOND
(Title 63, Chapter 56, U. C. A. 1953, as Amended)

That _____ hereinafter referred to as the "Principal" and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ and authorized to transact business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah, hereinafter referred to as the "Obligee," in the amount of _____ DOLLARS (\$ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Obligee, dated the _____ day of _____, 20____, to construct _____ in the County of _____, State of Utah, Project No. _____, for the approximate sum of _____ Dollars (\$ _____), which Contract is hereby incorporated by reference herein.

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall faithfully perform the Contract in accordance with the Contract Documents including, but not limited to, the Plans, Specifications and conditions thereof, the one year performance warranty, and the terms of the Contract as said Contract may be subject to Modifications or changes, then this obligation shall be void; otherwise it shall remain in full force and effect.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the state named herein or the heirs, executors, administrators or successors of the Owner.

The parties agree that the dispute provisions provided in the Contract Documents apply and shall constitute the sole dispute procedures of the parties.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the Provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION:

PRINCIPAL:

By: _____
(Seal)

Title: _____

WITNESS OR ATTESTATION:

SURETY:

By: _____
Attorney-in-Fact (Seal)

STATE OF _____)
) ss.
COUNTY OF _____)

On this _____ day of _____, 20____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney in-fact of the above-named Surety Company and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General
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PAYMENT BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

KNOW ALL PERSONS BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal," and _____, a corporation organized and existing under the laws of the State of _____ authorized to do business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); with its principal office in the City of _____, hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah hereinafter referred to as the "Obligee," in the amount of _____ Dollars (\$ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Obligee, dated the _____ day of _____, 20____, to construct _____ in the County of _____, State of Utah, Project No. _____ for the approximate sum of _____ Dollars (\$ _____), which contract is hereby incorporated by reference herein.

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall pay all claimants supplying labor or materials to Principal or Principal's Subcontractors in compliance with the provisions of Title 63, Chapter 56, of Utah Code Annotated, 1953, as amended, and in the prosecution of the Work provided for in said Contract, then, this obligation shall be void; otherwise it shall remain in full force and effect.

That said Surety to this Bond, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the Contract or to the Work to be performed thereunder, or the specifications or drawings accompanying same shall in any way affect its obligation on this Bond, and does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Contract or to the Work or to the specifications or drawings and agrees that they shall become part of the Contract Documents.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION:

PRINCIPAL:

By: _____ (Seal)

Title: _____

WITNESS OR ATTESTATION:

SURETY:

By: _____ Attorney-in-Fact (Seal)

STATE OF _____)
) ss.
COUNTY OF _____)

On this _____ day of _____, 20____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES
Division of Facilities Construction and Management

DFCM

CHANGE ORDER # _____

CONTRACTOR: _____

AGENCY OR INSTITUTION: _____

PROJECT NAME: _____

PROJECT NUMBER: _____

CONTRACT NUMBER: _____

ARCHITECT: _____

DATE: _____

CONSTRUCTION CHANGE DIRECTIVE NO.	PROPOSAL REQUEST NO.	AMOUNT		DAYS	
		INCREASE	DECREASE	INCREASE	DECREASE

	Amount	Days	Date
ORIGINAL CONTRACT			
TOTAL PREVIOUS CHANGE ORDERS			
TOTAL THIS CHANGE ORDER			
ADJUSTED CONTRACT			

DFCM and Contractor agree that the terms, contract sum, scope of the Work and time specified in this Change Order shall constitute the full accord and satisfaction, and complete adjustment to the Contract and includes all direct and indirect costs and effects related to, incidental to, and/or reasonably implied from such change in the contract terms, sum, scope of the Work and time.

Contractor: _____ Date _____

Architect/Engineer: _____ Date _____

Agency or Institution: _____ Date _____

DFCM: _____ Date _____

Funding Verification: _____ Date _____



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

Division of Facilities Construction and Management

DFCM

CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT _____ PROJECT NO: _____

AGENCY/INSTITUTION _____

AREA ACCEPTED _____

The Work performed under the subject Contract has been reviewed on this date and found to be Substantially Completed as defined in the General Conditions; including that the construction is sufficiently completed in accordance with the Contract Documents, as modified by any change orders agreed to by the parties, so that the State of Utah can occupy the Project or specified area of the Project for the use for which it is intended.

The DFCM - (Owner) accepts the Project or specified area of the Project as Substantially Complete and will assume full possession of the Project or specified area of the Project at _____ (time) on _____ (date).

The DFCM accepts the Project for occupancy and agrees to assume full responsibility for maintenance and operation, including utilities and insurance, of the Project subject to the itemized responsibilities and/or exceptions noted below:

The Owner acknowledges receipt of the following closeout and transition materials:

☐ Record Drawings ☐ O & M Manuals ☐ Warranty Documents ☐ Completion of Training Requirements

A list of items to be completed or corrected (Punch List) is attached hereto. The failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents, including authorized changes thereof. The amount of _____. (Twice the value of the punch list work) shall be retained to assure the completion of the punch list work.

The Contractor shall complete or correct the Work on the list of (Punch List) items appended hereto within _____ calendar days from the above date of issuance of this Certificate. If the list of items is not completed within the time allotted the Owner has the right to be compensated for the delays and/or complete the work with the help of independent contractor at the expense of the retained project funds. If the retained project funds are insufficient to cover the delay/completion damages, the Owner shall be promptly reimbursed for the balance of the funds needed to compensate the Owner.

CONTRACTOR (include name of firm) by: _____
(Signature) DATE

A/E (include name of firm) by: _____
(Signature) DATE

USING INSTITUTION OR AGENCY by: _____
(Signature) DATE

DFCM (Owner) by: _____
(Signature) DATE

4110 State Office Building, Salt Lake City, Utah 84114
telephone 801-538-3018 • facsimile 801-538-3267 • <http://dfcm.utah.gov>

cc: Parties Noted
DFCM, Director

SECTION 02725 - AGGREGATE BASE**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Aggregate base including subgrade preparation, hauling, spreading, moisture control, compacting, and material tests.

1.02 SUBMITTALS

- A. Laboratory test results indicating conformance to "Materials," this Section.

1.03 MEASUREMENT AND PAYMENT

- A. If quantity of aggregate base is changed from that required by Contract Documents, Contract Price will be adjusted on basis of unit adjustment price set forth in Agreement.
- B. Aggregate Base; cubic yard (CY): Unit adjustment price includes furnishing all materials, equipment, and labor to construct aggregate base to dimensions required, including subgrade preparation, hauling, spreading, moisture control, compacting, and material tests, measured in place.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Aggregate shall be gravel, crushed gravel, crushed quartzite, crushed limestone, or crushed slag meeting UDOTs following gradation limits for 1-1/2 inch:

Sieve Size	Percent Passing Sieve
1-1/2"	100
3/4"	81-91
1/2"	67-77
No. 4	43-53
No. 16	23-29
No. 200	6-10

- B. Percent of loss shall not exceed 45 in accordance with AASHTO T96 and 25 in accordance with AASHTO T104, 5-cycle, sodium sulfate solution. Plasticity index shall not exceed 4 in accordance with AASHTO T90.

PART 3 EXECUTION**3.01 CONSTRUCTION**

- A. Prior to placing aggregate base, prepare subgrade in a manner meeting requirements specified herein.

- B. Moisture content shall be sufficient to prevent segregation of aggregate and to obtain satisfactory compaction. Use of a central mixing plant to obtain moisture content will be permissible, but wetting aggregate in cars, bins, stock piles, or trucks will not be permitted.
- C. Construct base in layers not more than 4" compacted thickness, except that if tests indicate desired results are being obtained, compacted thickness of any layer may be increased to a maximum of 8".
- D. Immediately after material has been placed with spreader, compact with tamping roller, vibratory roller, pneumatic-tired roller, or with combination of any roller types to a density of not less than 95% maximum density determined in accordance with ASTM D1557.
- E. Compaction of top layer shall continue until aggregates are completely interlocked and stable and all movement of material stops. Give top layer final rolling with 3-wheel or tandem roller.
- F. If any subgrade material is worked into base material during the compacting or finishing operations, remove granular material within affected area and replace with new aggregate.
- G. Engineer shall observe "proof rolling" of completed base installations to verify adequate compaction is provided.

END OF SECTION

SECTION 02751 – ASPHALTIC PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Asphaltic pavement including prime coat, tack coat, preparation and compaction of asphaltic mixtures, and surface tests.

1.02 RELATED SECTIONS

- A. Section 02725 – Aggregate Base

1.03 QUALITY ASSURANCE

- A. Provide testing of materials and job-mix formula.
- B. Samples of materials proposed for use shall be submitted to an approved testing laboratory for test, analysis, and development of job-mix formulas.
- C. Sample materials in accordance with AASHTO T2 (aggregates), T40 (asphaltic material) and T168 (asphaltic paving mixtures).
- D. Submit job-mix formula for each mixture. Formulas shall be determined by an approved testing laboratory based on "Marshall Method"
 - 1. Submit job-mix formulas to Engineer prior to any pavement construction.

1.04 MEASUREMENT AND PAYMENT

- A. If quantity of asphaltic concrete pavement is changed from that required by Contract Documents, Contract Price will be adjusted on basis of unit adjustment price set forth in Agreement.
- B. Asphaltic Concrete Pavement; square yard (SY): Unit adjustment price includes furnishing all materials, equipment, and labor to construct asphaltic pavement including prime coat; tack coats; preparation, hauling, spreading, and compacting asphaltic mixtures; surface tests and all sampling and laboratory testing of materials.

PART 2 PRODUCTS

2.01 ASPHALTIC MATERIALS

- A. Use following asphaltic materials for purpose indicated and meet requirements for type and grade of applicable specifications listed in AISS No. 2, "Specifications for Paving and Industrial Asphalts."
 - 1. Prime coat: Liquid asphalt MC-30.
 - 2. Tack coat: Liquid asphalt RC-70.
 - 3. Paving mixture: Asphalt cement, 85-100.

2.02 MINERAL AGGREGATE

- A. Mineral filler shall meet requirements of AASHTO M17.

- B. Fine aggregate shall consist of hard, durable grains of natural sand, crushed stone, or crushed gravel.
- C. Coarse aggregate shall consist of crushed stone, crushed gravel, or crushed slag. Aggregate shall be produced from sources which normally show an abrasion loss not exceeding 40, determined in accordance with AASHTO T96 and a freezing and thawing loss not greater than 10, determined in accordance with AASHTO T104, 5-cycle, sodium sulfate solution.
- D. Combination of aggregates shall meet the following gradation:

Sieve Size	Percent Passing Sieve (Weight)	
	Base Course	Surface Course
1"	100	100
3/4"	90-100	90-100
1/2"	<90	<90
No. 8	23-49	23-49
No. 200	2-8	2-8

PART 3 EXECUTION

3.01 SEQUENCE OF WORK

- A. Construction operations shall be undertaken in following sequence:
 - 1. Clean aggregate base course, prepare, and apply prime coat.
 - 2. Prepare, transport, spread, and roll first layer of asphaltic concrete base course.
 - 3. Prepare and apply tack coat.
 - 4. Prepare, transport, spread, and roll second layer of base course.
 - 5. Prepare and apply tack coat.
 - 6. Prepare, transport, spread, and roll asphaltic concrete binder course.
 - 7. Prepare and apply tack coat.
 - 8. Prepare, transport, spread, and roll asphaltic concrete surface course.

3.02 EQUIPMENT

- A. Asphalt mixing plant designed to produce a uniform mixture within job-mix tolerances.
- B. Self-powered paving machine with electronic level control and long ski-grade follower capable of spreading mixture to thickness and width specified, true to line, grade, and crown shown on Drawings.
- C. Sufficient number of smooth, metal-bedded haul trucks to ensure orderly and continuous paving operations.
- D. Pressure distributor capable of applying prime and/or tack coats uniformly without atomization.
- E. One or more steel-wheeled, self-propelled rollers, weighing 10 to 12 tons.
- F. One or more self-propelled, pneumatic-tired rollers capable of producing minimum compression of 300 lb/in. width of tire tread.

- G. Power broom or power blower.
- H. Hand tools as necessary to complete Work.

3.03 PRIME COAT INSTALLATION

- A. After aggregate base course has been prepared, surface shall be made free of all loose material, and when in a warm, dry condition, apply asphaltic material uniformly at rate of 0.3 to 0.5 gal/sq yd.
- B. Allow prime coat to cure until it has been absorbed by surface and will not pick up. Minimum curing time shall be not less than 24 hours. Pools of asphalt material occurring in depressions shall be broomed or squeegeed over surrounding surface same day prime coat is applied. At no time during curing period shall traffic be allowed upon primed surface.
- C. If primed surface is damaged, it shall be repaired. Prime coat shall be maintained at all times until cover coat is constructed.

3.04 TACK COAT INSTALLATION

- A. Prior to placing second layer of base course and prior to placing binder and surface course, clean all exposed surface of loose or foreign material; and then apply tack coat at rate of 0.02 to 0.05 gal/sq yd.

3.05 PREPARING MIXTURE

- A. Regulate exact proportions of various materials within limits required by job-mix formula so as to produce satisfactory bituminous coating and mixture. Order of sequence in which several aggregates shall be drawn or weighed may vary under different conditions. Aggregates shall first be mixed dry, then asphalt cement added. Mixer shall be so operated that mixture is of consistently uniform temperature and as discharged from mixer will not vary more than 20°F. Temperature of base course mixture shall not exceed 310°F and that of binder and/or surface course mixture shall not exceed 330°F.
- B. In batch type mixers, size of batch shall not exceed manufacturer's rated capacity. Dry-mixing time, after all aggregates are in mixer, shall be not less than 5 seconds. Wet-mixing time, after all asphalt has been added and before opening discharge gate, shall be not less than 25 seconds. Length of dry- and wet-mixing periods may vary, but total mixing time shall be not less than 40 seconds.
- C. In continuous-type plants, mixing time may be determined by weight method using following formula:
$$\frac{\text{Pugmill contents, lb}}{\text{Pugmill output, lb/sec}} = \text{Mixing time (seconds)}$$

Mixing time shall be at least 30 seconds.

3.06 PLACING ASPHALTIC CONCRETE MIXTURE

- A. Drawings show thickness of various courses. Place a maximum thickness of 3" in any 1 lift.
- B. Remove all standing water from surface prior to paving operations.
- C. Spread mixture on areas of uniform width with electronically controlled asphalt spreader with long ski-grade follower. Spread mixture at such a rate that when compacted, layer will be substantially

of thickness and dimensions specified or shown on Drawings. Use string line as a guide for finishing machine to maintain edge alignment.

- D. Asphaltic concrete mixtures shall have a minimum temperature of 225°F for base course and 245°F for binder and/or surface course. Deliver hot asphaltic concrete at a rate sufficient to provide as nearly continuous of spreading unit as possible.
- E. For irregular areas where use of a finishing machine is not practical, mixtures may be spread by hand methods. Spread hot mixture uniformly with hot shovels and rakes. After spreading hot mixture, carefully smooth mixture to remove all segregated coarse aggregate and rake marks. Rakes and lutes for hand spreading and smoothing shall be of type designed for use on asphalt mixtures.
- F. Apply tack coat to edge of paving placed previous day prior to placing adjacent lane.

3.07 COMPACTION

- A. Compact each layer thoroughly and promptly. For all rollers, initial contact with hot mixture shall be made by compaction roll. Roll longitudinal joints smooth and even at time of construction.
- B. Use mechanical tampers in areas inaccessible to rollers. Use steel-tired finish rollers to smooth out all marks and roughness in surface. Overall rolling procedure shall produce a surface free of ridges, marks, or bumps.
- C. Compact each layer to not less than 97% of maximum density obtained by laboratory job-mix formula.

3.08 JOINT CONSTRUCTION

- A. Offset longitudinal joints at least 3" for each succeeding layer. Adjust spreading of hot mixture along longitudinal joints to secure complete closure of joint and full compression of mixture with a smooth surface after compaction.
- B. Separate transverse construction joints by not less than 6'. Saw cold mixture layer to a straight line at right angles to center line so that a full thickness, a true surface, and a vertical edge will be provided.

3.09 TOLERANCES

- A. After asphaltic mixture has been compacted, test surface for smoothness by means of a 10' straightedge placed parallel to center line of pavement and touching surface. If ordinates measured from straightedge to pavement surface exceed 1/4", entire area so affected shall be corrected.

3.10 FIELD QUALITY CONTROL

- A. Place asphalt paving mixture only when specified density can be obtained. Take precautions at all times to compact mixture before it cools too much to obtain required density. Do not place mixture on any wet or frozen surface or when weather conditions will otherwise prevent its proper handling or finishing.
- B. Do not place asphaltic surface course and/or leveling-binder course when air temperature is below 40°F. If course is 1" or less in thickness, temperature must be 50°F or above.

- C. Do not place asphaltic base course when air temperature is below 40°F.
- D. Provide one sample of in-place mixture for each days run to laboratory for testing. Sample shall be tested for requirements specified.
- E. Provide armored thermometer suitable for asphalt temperature testing prior to placement.

END OF SECTION

SECTION 02765 – PAVEMENT MARKINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Parking lot stall painting.

1.02 RELATED SECTIONS

- A. Section 02751 – Asphaltic Paving

1.03 MEASUREMENT AND PAYMENT

- A. If quantity of following item is changed from that required by Contract Documents, Contract Price will be adjusted on basis of unit adjustment prices set forth in Agreement.
- B. Parking Stall Painting, linear foot (LF): Includes furnishing all materials, labor, and equipment to paint lines delineating parking stalls.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Traffic paint: Yellow, ready-mixed traffic paint; UDOT Solvent-Free Epoxy or Methyl Methacrylate.
- B. Service Life: Minimum 48 Months

PART 3 EXECUTION

3.01 PARKING LOT STALL PAINTING

- A. Furnish and apply pavement marking materials in accordance with lines and dimensions shown on Drawings or as described herein.
- B. Perform painting in neat, straight lines. Apply 4" continuous painted line with hand striper at the rate of 16 gallons per mile of line. Stall lines shall be accurately chalk-lined before being painted.

END OF SECTION

SECTION 16050 – BASIC ELECTRICAL MATERIALS AND METHODS**PART 1 - GENERAL****1.01 WORK INCLUDED:**

- A. Provide all items, articles, materials, equipment, operations and/or methods listed, mentioned, shown and/or scheduled on the drawings and/or in these specifications, including all labor, services, permits, fees, and incidentals necessary and required to perform and complete the electrical work described in this Division. Apply for all permits early in the project to avoid problems due to code revisions.
- B. See the contract conditions (general and supplementary) and Division 1 for requirements concerning this Division including, but not limited to, submittals, shop drawings, substitution requests, change orders, maintenance manuals, record drawings, coordination, permits, record documents and guarantees.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

Coordinate with grading and surface preparation activities specified elsewhere.

1.03 QUALITY ASSURANCE:

Do all work in accordance with regulations of the National Electrical Code, state and local codes and amendments, Utah Army National Guard requirements, and all other applicable codes.

1.04 PROJECT CONDITIONS:

- A. The Contractor shall inspect the job site prior to bidding and familiarize himself with existing conditions which will affect the work. Prior to start of work, obtain "As built", "Record", or other Drawings showing existing underground utilities.
- B. Electrical drawings are diagrammatic indicating approximate location of lighting poles, lighting fixtures, electrical boxes, etc. Consult the Civil and Landscape drawings to avoid conflicts with curbs, fences, trees etc. When required make all deviations from Drawings to make the work conform to the site as constructed, and to related work of others. Minor relocations ordered prior to installation may be made without added cost to Owner.
- C. Call to the attention of the Engineer any error, omission, conflict or discrepancy in Drawings and/or Specifications. Do not proceed with any questionable items of work until clarification of same has been made.
- D. Coordination of equipment to the available space and to the access routes through the construction shall be the Contractor's responsibility.

1.05 SHOP DRAWINGS:

- A. Prior to ordering equipment, and prior to Contractor's first application for payment, the Contractor shall, within 30 days after award of this work, submit six (6) complete lists, neatly bound in 3-ring binder form, with indexed tabs, to the Engineer, of materials and equipment he proposes to furnish. List shall bear Contractor's stamp, signature or other means to show that he has inspected same and certified that submitted material is correct in regard to quantity, size, dimension, quality and is coordinated with the Contract Documents.

- B. Each list shall show cuts or pictures, type, size, rating, style, catalog numbers and manufacturer's name of each item.
- C. Provide complete materials (all materials) list showing "Specification Section", "Material Item", "Manufacturer's Name and Catalog Number", and all pertinent data.
- D. Contractor agrees that Shop Drawing Submittals processed by the Engineer are not Change Orders; that the purpose of Shop Drawing Submittals by the Contractor is to demonstrate to the Engineer that the Contractor understands the design concept, that he demonstrates his understanding by indicating which equipment and material he intends to furnish and install and by detailing the fabrication and installation methods he intends to use.
- E. Contractor further agrees that if deviations, discrepancies or conflicts between Shop Drawings and Specifications are discovered either prior to or after Shop Drawing Submittals are processed by the Engineer, the design Drawings and Specifications shall control and shall be followed.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. All materials shall be new and bear manufacturer's name, model number, electrical characteristics and other identification. All equipment to be U.L. approved if applicable.
- B. Material and equipment shall be standard product of manufacturer regularly engaged in production of similar material for at least five years (unless specifically exempted) and shall be manufacturer's latest design.
- C. If the description of a product is in conflict with the product as specified in the catalog number, the most costly description or catalog number shall generally take precedence. Contact the Engineer for clarification if this occurs.

2.02 FUSES:

- A. Provide fuses as indicated on the drawings, sized per NEC, or as required by the equipment manufacturer, whichever provides maximum protection, for a fully operational system.
- B. All fuses shall be furnished of the same manufacturer.
- C. All fuses shall be installed by the electrical contractor at job-site and only when equipment is to be energized. Fuses shall not be installed during shipment.
- D. Provide 10% spare fuses, but not less than 3 of any one size and type.
- E. Approved Manufacturers, with catalogue numbers listed in order: Bussman, Littelfuse, Ferraz Shawmut.
- F. If the electrical contractor wishes to furnish materials other than those specified, a written request, shall be submitted to the engineer for evaluation at least 8 days prior to the bid date. If the engineers evaluation indicates acceptance, a written addendum will be issued listing the other acceptable manufacturer.

2.03 BOXES:

- A. Outlet and junction boxes shall be sized in accordance with code requirements or as noted on the drawings.

- B. Exterior junction boxes shall be reinforced concrete, with engraved cast iron lids. Plastic boxes are not acceptable.

PART 3 - EXECUTION

3.01 GENERAL INSTALLATION METHODS:

- A. All items, articles, materials, and equipment specified under this Division shall be installed per the manufacturer's installation instructions. Where the manufacturer's instructions are in conflict with the directions provided elsewhere in this Contract, the Engineer shall be notified prior to beginning rough-in.
- B. Lighting poles shall be plumb and installed parallel with structural building lines. All equipment and cover plates shall fit neatly without gaps, openings, or distortions. Provide approved devices for closing all unused openings.
- C. Arrange circuit wiring as shown on the Drawings and do not alter or combine runs or homeruns without the specific approval of the Engineer.
- D. Ballasts and like equipment which are found to be noticeably noisier than other similar equipment on the project will be deemed defective and shall be replaced.

3.02 LABELING:

- A. Clearly and properly label the complete electrical system to indicate the loads served or the function of each item of equipment provided under this work.
- B. Provide typewritten branch panel schedules with protective clear, transparent covers accounting for every breaker installed.

3.03 SAFETY:

The Engineer has not been retained or compensated to provide design and construction review services relating to the Contractor's safety precautions or to means, methods, techniques, sequences or procedures required for the contractor to perform the work.

3.04 DEMOLITION:

- A. It is the intent of these specifications to require the contractor to make all necessary adjustments to the electrical system, required to meet code, and accommodate installation of the new and remodeled work.
- B. If existing junction boxes will be made inaccessible, new conduit and wire shall be provided to bypass the abandoned boxes.
- C. Locations of items shown on the drawings as existing are partially based on as-built and other drawings which may contain errors. The Contractor shall verify the correctness of the information shown prior to bidding and provide such labor and material as is necessary to accomplish the intent of the contract documents. The plans may show some demolition conditions, but are not intended to show all of them.
- D. All materials accumulated during the demolition process are the Owners property and shall be removed from the job site as directed by the Owner.
- E. Where changes are made in existing panels, time clocks, relays, etc., provide new labeling and schedules to accurately reflect the changes.

3.05 POWER INTERRUPTIONS:

- A. Keep outages to occupied areas to a minimum and prearrange all outages with the Owner's representative and utilities involved. Requests for outages shall state the specific dates and hours and the maximum durations, with the outages kept to these specified times. When power interruptions will last longer than 15 minutes at night time when site lighting is needed, the contractor shall provide temporary lighting for the affected parking areas..
- B. Contractor shall coordinate with the Owner so that work can be scheduled not to interrupt operations, normal activities, building and parking access, etc. Coordinate work with other crafts for proper scheduling.
- C. No circuits shall be turned off without prior approval from owner. Coordinate with the Owner any interruptions which affect the operation of the remaining portions of the facility.
- D. This contractor will be liable for any damages resulting from unscheduled outages or for those not confined to the preapproved times. Include all costs for overtime labor as necessary to maintain electrical services in the initial bid proposal. Temporary wiring and facilities, if used, shall be removed and the site left clean before final acceptance. Requests for outages must be submitted at least (5) days prior to intended shutdown time.

3.06 GROUNDING:

- A. Ground all electric lighting poles, raceways and enclosures in accordance with code rules and established safety practices.
- B. Grounding conductors shall have green insulation.

3.07 EQUIPMENT CONNECTIONS:

The voltage and phase of each lighting ballasts shall be checked before connecting.

3.08 PAINTING:

Touch up damaged and marred finishes on all lighting poles and fixtures.

309 PROJECT RECORD DOCUMENTS:**A. Maintenance of Documents:**

- 1. Maintain at Jobsite, One Record Copy of: Contract Drawings, Specifications, Addenda, Reviewed Shop Drawings, Change Orders, Other Modifications to Contract and Field Test Records.
- 2. Keep apart from documents used for construction.
- 3. Keep documents available at all times for inspection by Engineer.

B. Recording:

- 1. Label each document "PROJECT RECORD."
- 2. Keep record documents current. Do not permanently conceal any work until required information has been recorded.
- 3. Contract Drawings, legibly mark to record actual construction; including but not limited to the following:

- a. Depths of various elements; locations of underground items, with dimensions to building walls and corners; changes of dimensions and details; changes made by Addendum, Field Orders or Change Order.
- b. Specifications and Addenda; Legibly mark each Section to record changes made by Addendum, Field Order or Change Order.

C. Submittals:

At completion of project, transfer changes to clean new prints and specifications which will be supplied by the Engineer and deliver to the Engineer as "As-reported Record" drawings.

3.10 COMPLETION:

Complete each system as shown or specified herein and place in operation except where only roughing-in or partial systems are called for. Each system shall be tested and left in proper operation free of faults, shorts or unintentional grounds. Demonstrate system in the presence of the Engineer, the Owner or their representative when requested.

3.11 FINAL OBSERVATION:

- A. Contractor shall submit written certification that:
 1. Contract Documents have been reviewed.
 2. Contractor has inspected Project for compliance with Contract Documents.
 3. Work has been completed in accordance with Contract Documents.
 4. Equipment and Systems have been tested and are operational.
 5. Project is completed and ready for final inspection.
- B. Engineer will make final inspection as soon as possible after receipt of Certification.
- C. Should Engineer consider that work is finally complete in accordance with Contract Document requirements, Contractor shall make Contract Closeout submittals.
- D. Should Engineer consider that work is not finally complete:
 1. He will so notify Contractor, stating reasons.
 2. Contractor shall take immediate steps to remedy deficiencies, and send second written notice to Engineer certifying that work is complete.
 3. Engineer will reinspect work.
- E. The Engineer will make two final inspections. The first will determine deficiencies and errors in the work and the second will determine whether or not the noted deficiencies and errors have been satisfactorily corrected.
- F. If additional inspections are required because of the Contractor's failure to complete the deficiencies and errors prior to the second inspection, costs for the successive inspections will be back-charged to the Contractor by the Owner, who, in turn, will reimburse the Engineer. Charges will be based as follows:

1. Engineer time at current billing rates.
 2. Travel time, and all other expenses incurred in making inspections.
- G. Contractor to provide one (1) journeyman, tools, meters, instruments and other test equipment required by Engineer. Contractor to remove and replace trims, covers, fixtures, etc., for Engineer to review and test materials, systems, methods and workmanship. (Example: Removing panel covers to take voltage/amp readings, review connections and wire size, etc.)

END OF SECTION

SECTION 16120 – WIRES & CABLES**PART 1 - GENERAL****1.01 WORK INCLUDED:**

Provide all wires and cables as herein specified and shown on the associated drawings.

1.02 QUALITY ASSURANCE:

All wire and cable shall conform to Code and shall meet all ASTM specifications.

PART 2 – PRODUCTS**2.01 MATERIALS:**

- A. No. 8 AWG and larger conductors shall be Type "THWN" insulated, soft drawn, Class B stranded copper. Minimum conductor size shall be No. 8 AWG unless otherwise noted.
- B. Where adverse conductor exposure exists, code approved insulation suitable for the conditions encountered shall be used unless shown otherwise on the Drawings.
- C. Wire and cable shall be new, shall have grade of insulation, voltage and manufacturer's name permanently marked on outer covering at regular intervals and shall be delivered in complete coils or reels with identifying size and insulation tags.

2.02 ALUMINUM OPTIONS:

Not acceptable.

2.03 COLOR CODE:

- A. All wire shall be color banded at each end and at all junction and pull boxes for size 8 AWG and larger.
- B. Color Code throughout the project shall be:
 - 1. 480Y/277V System

Phase A	Brown
Phase B	Orange
Phase C	Yellow
Neutral	Grey
Equipment Ground	Green
 - 2. 208Y/120V System

Phase A	Black
Phase B	Red
Phase C	Blue
Neutral	White
Equipment Ground	Green
Isolated Ground	Green w/yellow stripe #12 & #10

Green and Yellow bands #8 and up

PART 3 - EXECUTION

3.01 SPLICES AND TERMINATIONS:

- A. Splices are to be made up complete promptly after wire installation.
- B. Splices for No. 8 and larger wires shall be made with mechanically applied pressure type connectors. All taped joints shall be with "Scotch 33+" or equal, applied in half-lap layers without stretching to deform.
- C. Insulation shall be removed with a stripping tool designed specifically for that purpose. A pocket knife is not an acceptable tool. All conductors shall be left nick-free.
- C. Thermoplastic insulated wire and cable shall not be installed or handled in temperatures below +14 degrees F (-10 C). Cross-linked polyethylene insulated wire and cable may be installed to -40 degrees F (-40 C).

END OF SECTION

SECTION 16130 - RACEWAYS

PART 1 - GENERAL

1.01 WORK INCLUDED:

Provide all raceways, wireways and associated fittings as herein specified and shown on the associated drawings.

1.02 APPLICATION:

- A. Galvanized rigid conduit (GRC), intermediate metal conduit (IMC), and PVC conduit may be used.
- B. Schedule 40 PVC conduit may only be used below grade. PVC may not be used above grade.
- C. Drawing notes requiring a specific type of raceway shall take precedence over the specifications.
- D. Electrical wiring shall be in U.L. approved raceways and enclosures throughout.

PART 2 - PRODUCTS

2.01 FITTINGS:

GRC and IMC shall be coupled and terminated with threaded fittings. Ends shall be bushed with insulating bushings.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Provide pull boxes where shown or required to limit the number of bends in any run to not more than three 90 degree bends. Verify with the Engineer exact locations.
- B. Provide a ground wire sized per code in all conduit.
- C. PVC conduit shall not be installed less than 30" under roadways or areas subject to heavy traffic. Minimum trench depth in other areas shall be 24" unless otherwise noted.
- D. Elbows larger than 30 degrees and one inch shall be galvanized rigid conduit wrapped with PVC tape.
- E. Provide a ground wire sized per code in all PVC conduits. Conductor quantities indicated in conduits do not include ground wires unless otherwise noted.
- F. Provide trenching, backfilling, compaction, re-paving or other site restoration as required by the work done in this division.
- G. Install a detectable 6 inch wide yellow vinyl tape with letter "Caution: Buried Electrical Line Below" 18 inches above all buried service conduit and wire not under structures.

- H. Backfill material for all trenches under paved areas shall be coarse sand or crushed rock, installed in layers not to exceed eight inches and compacted to 95% of maximum density at optimum moisture content to preclude subsequent settlement. Compaction by water method. The top 18 inches of trenches in landscaped or grassed areas shall be backfilled with native soil and tamped.
- I. All joints to be threaded and taped or glued to prevent entry of water into the conduits.
- J. Raceways shall be left clean and free of debris.
- K. Provide a pull string in all empty conduits.
- L. All conduit shall be 1 inch minimum.

END OF SECTION

SECTION 16500 - LIGHTING**PART 1 - GENERAL****1.01 WORK INCLUDED:**

Provide light fixtures with lamps and accessories as herein specified and shown on the drawings.

1.02 QUALITY ASSURANCE:

If the catalog number of a specified fixture should conflict with the fixture description or the general lighting specifications, such conflicts shall be brought to the attention of the Engineer prior to bidding.

1.03 SUBMITTALS:

- A. Submit complete and descriptive submittals.
- B. Verify that fixture description matches that which is indicated by the specified catalog number.
- C. All features mentioned in the fixture list shall be highlighted on the submitted items.
- D. Submit lamp intended for use with each fixture.
- E. Submit Operation and Maintenance data. See 16050.

PART 2 – PRODUCTS**2.01 ACCEPTABLE MANUFACTURERS:**

- A. See Fixture Schedule for acceptable manufacturers.
- B. Requests for substitution of other products will be considered if submitted in accordance with the general conditions, and section 16050.
- C. Substitution requests for fixtures equal to those specified shall include complete construction and photometric data including, if applicable, candlepower distribution curve, spacing to mounting height ratio, table of coefficients of utilization, isofootcandle curve, ANSI beam spread classification, efficiency, etc.

2.02 MATERIALS:

Provide exterior fixtures with Area Coverage, and wet label.

2.03 BALLASTS:

- A. All ballasts shall be capable of providing reliable operation of the lamps at the lowest temperature normally encountered. The contractor shall confirm that the ballasts are appropriate for the ambient conditions.
- B. Ballasts deemed excessively noisy shall be replaced without cost to the Owner.
- C. HID ballasts shall be as follows:

1. High Pressure Sodium (HPS):
 - a. High power factor, normal ambient, 180 degrees C insulation class, with capacitor and ignitor.
 - b. Constant wattage auto transformer type.

2.04 LAMPS:

- A. High intensity discharge lamps shall be either coated or clear as recommended by the fixture manufacturer. Acceptable lamp manufacturers are Osram/Sylvania, Philips, and General Electric.
- B. All lamps and fixtures shall be in proper operation at the time of acceptance. Provide ten percent spare lamps, with a minimum of two, for each size and type used.

2.05 POLES:

- A. Each pole shall have adequate strength and rigidity to withstand not less than 100 mph winds without damage to the poles and attached fixtures and lamps. Pole bases shall be equipped with handholes with matching covers, and base cover.
- B. Anchor bolts shall be hot-dip galvanized after fabrication and threads cleared. Nuts, washers, and other hardware and fittings shall be corrosion resistant alloy material of adequate strength. Indicated pole heights are above the top of the concrete base.
- C. After the poles have been installed, shimmed and plumbed, grout the spaces between the pole bases and the concrete base with non-shrink concrete grout material.
- D. Provide ground rod connection to each pole base as detailed on the drawings. Ground connection shall be accessible from handhole location.
- E. Provide poles with handhole. Mount fuse clip inside handhole accessible from grade.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Fixtures installed under this work shall be properly and adequately supported
- B. Fixture supports shall provide proper alignment and leveling/plumbing of poles and fixtures, and shall be arranged to maintain the alignment at all times. The final decision as to adequacy of alignment shall be given by the Engineer.
- C. Fixtures shall be left clean at the time of acceptance of the work and every lamp shall be in operation. The responsibility for cleaning or protecting fixtures from dirt, dust, paint, debris, etc. shall rest with the Contractor performing this division of work.
- D. Prior to the purchase of any luminaire, the finish shall be verified with the Engineer and the voltage shall be verified based on the panelboard voltage.

END OF SECTION